

APPENDIX M

Future Scenarios' LOS Exhibits

I-41 Traffic and Engineering Study
Year 2028 No Build
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2028 No Build Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & CTH S (Freedom Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	1	1	0	0	1	1	0	<1	1	0	0	0
				Volume (vph)	290	120	-	-	230	130	50	0	100	-	-	-
				Total Delay LOS	9.4	0	-	-	0	0	39.7	39.7	9.5	-	-	-
			PM	Volume (vph)	150	160	-	-	190	170	60	0	130	-	-	-
				Total Delay LOS	8.7	0	-	-	0	0	21.6	21.6	10.1	-	-	-
					A	A	-	-	A	A	C	C	B	-	-	-
IH-41 SB ramps & CTH S (Freedom Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1
				Volume (vph)	-	350	90	150	130	-	-	-	-	60	0	-
				Total Delay LOS	-	0	0	9.1	0	-	-	-	-	26.9	26.9	-
			PM	Volume (vph)	-	210	80	120	130	-	-	-	100	0	-	
				Total Delay LOS	-	0	0	8.3	0	-	-	-	20.7	20.7	-	
					-	A	A	A	A	-	-	-	C	C	-	
IH 41 NB ramps & CTH U (County Line Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	<1>	0	0	0	0	0	1	1	1	1	0
				Volume (vph)	40	0	70	-	-	-	-	130	250	60	300	-
				Total Delay LOS	14.4	14.4	14.4	-	-	-	-	0	0	8.4	0	-
			PM	Volume (vph)	80	0	70	-	-	-	-	220	130	70	280	-
				Total Delay LOS	18.8	18.8	18.8	-	-	-	-	0	0	8.3	0	-
					C	C	C	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & CTH U (County Line Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	0	0	0	<1>	0	1	1	0	0	1	1
				Volume (vph)	-	-	-	100	0	70	70	100	-	-	260	-
				Total Delay LOS	-	-	-	15.5	15.5	15.5	8.3	0	-	-	0	-
			PM	Volume (vph)	-	-	-	220	0	140	80	220	-	-	130	-
				Total Delay LOS	-	-	-	33.4	33.4	33.4	7.8	0	-	-	0	-
					-	-	-	D	D	D	A	A	-	-	A	-
IH 41 NB ramps & CTH J (Hyland Ave)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	<1>	0	0	0	0	0	1>	0	0	<1	0
				Volume (vph)	150	0	120	-	-	-	-	290	350	80	180	-
				Total Delay LOS	6.8	6.8	6.8	-	-	-	-	16.5	16.5	5.1	5.1	-
			PM	Volume (vph)	160	0	300	-	-	-	-	210	220	90	460	-
				Total Delay LOS	16.2	16.2	16.2	-	-	-	-	9.1	9.1	8.1	8.1	-
					C	C	C	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & CTH J (Hyland Ave)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1>	0	0	<1	0	0	1>	0
				Volume (vph)	-	-	-	130	0	60	180	260	-	-	130	230
				Total Delay LOS	-	-	-	7.5	7.5	7.5	6.6	6.6	-	-	11.1	11.1
			PM	Volume (vph)	-	-	-	320	0	110	100	270	-	-	230	230
				Total Delay LOS	-	-	-	14.9	14.9	14.9	6.4	6.4	-	-	21.3	21.3
					-	-	-	B	B	B	A	A	-	-	C	C
IH 41 NB ramps & WIS 55 (Delanglade St)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	1	0
				Volume (vph)	50	0	270	-	-	-	-	500	130	30	250	-
				Total Delay LOS	4.3	4.3	6.9	-	-	-	-	5.9	4	3.1	4.9	-
			PM	Volume (vph)	90	0	370	-	-	-	-	570	120	30	350	-
				Total Delay LOS	5.2	5.2	9.7	-	-	-	-	7.8	3.9	3.1	5.8	-
					A	A	A	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & WIS 55 (Delanglade St)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1	1	0	<2	0	0	1	1
				Volume (vph)	-	-	-	80	0	70	270	280	-	-	200	140
				Total Delay LOS	-	-	-	5.4	5.4	4.2	4.8	4.9	-	-	6.2	5
			PM	Volume (vph)	-	-	-	190	0	50	410	250	-	-	190	80
				Total Delay LOS	-	-	-	7.8	7.8	3.9	6	4.6	-	-	7.9	5
					-	-	-	A	A	A	A	A	-	-	A	A
IH 41 NB ramps & CTH N (Freedom Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	110	-	170	-	-	-	-	480	190	80	250	-
				Total Delay LOS	20.6	-	0	-	-	-	-	11.6	0	10.9	3.3	-
			PM	Volume (vph)	430	-	360	-	-	-	-	460	140	90	570	-
				Total Delay LOS	63.4	-	0	-	-	-	-	14.4	0	14.1	5.8	-
					E	-	A	-	-	-	-	B	A	B	A	-
IH 41 SB ramps & CTH N (Freedom Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	0	<1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	120	-	70	320	270	-	-	210	270
				Total Delay LOS	-	-	-	20.3	-	0	12	3.5	-	-	10.7	0
			PM	Volume (vph)	-	-	-	C	-	A	B	A	-	-	B	A
				Total Delay LOS	-	-	-	350	-	120	340	550	-	-	310	200
					-	-	-	24.6	-	0	20.5	7	-	-	15.1	0
IH 41 NB ramps & CTH E (Ballard Rd)	No Build (2028)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	540	-	350	-	-	-	-	650	270	810	290	-
				Total Delay LOS	46	-	0	-	-	-	-	17.3	0	81.6	0.1	-
			PM	Volume (vph)	420	-	150	-	-	-	-	1140	190	580	790	-
				Total Delay LOS	39.6	-	0	-	-	-	-	74.9	0	41.9	18.7	-
					D	-	A	-	-	-	-	F	A	D	B	-
IH 41 SB ramps & CTH E (Ballard Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	230	-	660	160	1030	-	-	870	550
				Total Delay LOS	-	-	-	30.7	-	0	18	25.8	-	-	41	0
			PM	Volume (vph)	-	-	-	230	-	510	450	1110	-	-	1140	660
				Total Delay LOS	-	-	-	34	-	0	34.9	14.5	-	-	34.5	0
					-	-	-	C	-	A	C	B	-	-	C	A
IH 41 NB ramps & WIS 47 (Richmond St)	No Build (2028)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	270	-	150	-	-	-	-	560	420	300	620	-
				Total Delay LOS	42.7	-	0	-	-	-	-	23.8	0	10	13.7	-
			PM	Volume (vph)	480	-	260	-	-	-	-	920	510	300	1060	-
				Total Delay LOS	40.6	-	0	-	-	-	-	40.3	0	17.9	12.8	-
					D	-	A	-	-	-	-	D	A	B	B	-
IH 41 SB ramps & WIS 47 (Richmond St)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	280	-	240	380	450	-	-	640	460
				Total Delay LOS	-	-	-	42.3	-	0	5.6	0.1	-	-	20.8	0
			PM	Volume (vph)	-	-	-	520	-	290	230	1170	-	-	840	310
				Total Delay LOS	-	-	-	40.9	-	0	9.7	1.1	-	-	30.2	0
					-	-	-	D	-	A	A	A	-	-	C	A

I-41 Traffic and Engineering Study
Year 2028 No Build
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2028 No Build Intersection Operations																	
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & WIS 15 (Northland Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	<1	1	0	0	0	
				Volume (vph)	600	830	-	-	840	150	190	-	440	-	-	-	
				Total Delay	161	5.2	-	-	24.3	0	36.4	-	0	-	-	-	
				LOS	F	A	-	-	C	A	D	-	A	-	-	-	
				PM	Volume (vph)	890	970	-	-	1350	300	300	-	800	-	-	-
					Total Delay	310.6	0.3	-	-	111.4	0	43.6	-	0	-	-	-
IH 41 SB ramps & WIS 15 (Northland Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	0	0	1	0	1	
				Volume (vph)	200	1240	-	-	650	380	-	-	-	190	-	810	
				Total Delay	8.9	7.9	-	-	12.9	0	-	-	-	21.2	-	0	
				LOS	A	A	-	-	B	A	-	-	-	C	-	A	
				PM	Volume (vph)	230	1700	-	-	1170	480	-	-	-	160	-	890
					Total Delay	24.6	1.6	-	-	26	0	-	-	-	43.3	-	0
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	1	0	0	0	
				Volume (vph)	170	640	-	-	740	70	290	-	380	-	-	-	
				Total Delay	8	8.7	-	-	24.7	21.2	42.2	-	0	-	-	-	
				LOS	A	A	-	-	C	C	D	-	A	-	-	-	
				PM	Volume (vph)	730	1070	-	-	1800	310	420	-	490	-	-	-
					Total Delay	63.8	18.9	-	-	57.3	30.1	41.9	-	0	-	-	-
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	0	<1	1	
				Volume (vph)	-	650	210	380	650	-	-	-	-	160	-	290	
				Total Delay	-	30.7	0	6.2	0.2	-	-	-	-	35.6	-	106	
				LOS	-	C	A	A	A	-	-	-	-	D	-	F	
				PM	Volume (vph)	-	1580	420	600	1620	-	-	-	-	220	-	500
					Total Delay	-	73.1	0	25	8.5	-	-	-	-	36.7	-	257.3
IH 41 NB ramps & WIS 125 (College Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0	
				Volume (vph)	180	580	-	-	650	120	300	-	430	-	-	-	
				Total Delay	8.5	6.6	-	-	24	0	33.5	-	0	-	-	-	
				LOS	A	A	-	-	C	A	C	-	A	-	-	-	
				PM	Volume (vph)	560	1010	-	-	1380	290	510	-	490	-	-	-
					Total Delay	34.8	9.9	-	-	66.5	0	31.4	-	0	-	-	-
IH 41 SB ramps & WIS 125 (College Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2	
				Volume (vph)	-	550	160	290	660	-	-	-	-	210	-	340	
				Total Delay	-	27.5	0	41.5	4.9	-	-	-	-	36.7	-	0	
				LOS	-	C	A	D	A	-	-	-	-	D	-	A	
				PM	Volume (vph)	-	1380	600	440	1450	-	-	-	-	190	-	210
					Total Delay	-	33.3	0	14.2	0	-	-	-	-	35.9	-	0
IH 41 NB off ramp & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0	
				Volume (vph)	-	260	-	-	520	-	210	-	450	-	-	-	
				Total Delay	-	5.7	-	-	7.7	-	13.4	-	0	-	-	-	
				LOS	-	A	-	-	A	-	B	-	A	-	-	-	
				PM	Volume (vph)	-	380	-	-	670	-	200	-	400	-	-	-
					Total Delay	-	5.9	-	-	8.9	-	15.3	-	0	-	-	-
IH 41 NB on ramp & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0	
				Volume (vph)	420	260	-	-	650	80	-	-	-	-	-	-	
				Total Delay	13	0.3	-	-	12.1	5.1	-	-	-	-	-	-	
				LOS	B	A	-	-	B	A	-	-	-	-	-	-	
				PM	Volume (vph)	630	380	-	-	710	160	-	-	-	-	-	-
					Total Delay	13.9	0.3	-	-	17.2	7.8	-	-	-	-	-	-
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1	
				Volume (vph)	-	550	210	160	490	-	-	-	-	130	-	460	
				Total Delay	-	112.3	27.1	50.7	21.4	-	-	-	-	18.7	-	49.2	
				LOS	-	F	C	D	C	-	-	-	-	B	-	D	
				PM	Volume (vph)	-	830	410	330	380	-	-	-	-	180	-	310
					Total Delay	-	175.2	26.6	135.9	8.8	-	-	-	-	23.8	-	29.7

I-41 Traffic and Engineering Study
Year 2028 No Build with Signal Re-timings
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2028 No Build with Signal Re-timings Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & CTH S (Freedom Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	1	1	0	0	1	1	0	<1	1	0	0	0
				Volume (vph)	290	120	-	-	230	130	50	0	100	-	-	-
				Total Delay LOS	9.4	0	-	-	0	0	39.7	39.7	9.5	-	-	-
			PM	Volume (vph)	150	160	-	-	190	170	60	0	130	-	-	-
				Total Delay LOS	8.7	0	-	-	0	0	21.6	21.6	10.1	-	-	-
					A	A	-	-	A	A	C	C	B	-	-	-
IH 41 SB ramps & CTH S (Freedom Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1
				Volume (vph)	-	350	90	150	130	-	-	-	-	60	0	-
				Total Delay LOS	-	0	0	9.1	0	-	-	-	-	26.9	26.9	-
			PM	Volume (vph)	-	210	80	120	130	-	-	-	100	0	-	
				Total Delay LOS	-	0	0	8.3	0	-	-	-	20.7	20.7	-	
					-	A	A	A	A	-	-	-	C	C	-	
IH 41 NB ramps & CTH U (County Line Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	<1>	0	0	0	0	0	1	1	1	1	0
				Volume (vph)	40	0	70	-	-	-	-	130	250	60	300	-
				Total Delay LOS	14.4	14.4	14.4	-	-	-	-	0	0	8.4	0	-
			PM	Volume (vph)	80	0	70	-	-	-	-	220	130	70	280	-
				Total Delay LOS	18.8	18.8	18.8	-	-	-	-	0	0	8.3	0	-
					C	C	C	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & CTH U (County Line Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	0	0	0	<1>	0	1	1	0	0	1	1
				Volume (vph)	-	-	-	100	0	70	70	100	-	-	260	-
				Total Delay LOS	-	-	-	15.5	15.5	15.5	8.3	0	-	-	0	-
			PM	Volume (vph)	-	-	-	220	0	140	80	220	-	-	130	-
				Total Delay LOS	-	-	-	33.4	33.4	33.4	7.8	0	-	-	0	-
					-	-	-	D	D	D	A	A	-	-	A	-
IH 41 NB ramps & CTH J (Hyland Ave)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	<1>	0	0	0	0	0	1>	0	0	<1	0
				Volume (vph)	150	0	120	-	-	-	-	290	350	80	180	-
				Total Delay LOS	6.8	6.8	6.8	-	-	-	-	16.5	16.5	5.1	5.1	-
			PM	Volume (vph)	160	0	300	-	-	-	-	210	220	90	460	-
				Total Delay LOS	16.2	16.2	16.2	-	-	-	-	9.1	9.1	8.1	8.1	-
					C	C	C	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & CTH J (Hyland Ave)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1>	0	0	<1	0	0	1>	0
				Volume (vph)	-	-	-	130	0	60	180	260	-	-	130	230
				Total Delay LOS	-	-	-	7.5	7.5	7.5	6.6	6.6	-	-	11.1	11.1
			PM	Volume (vph)	-	-	-	320	0	110	100	270	-	-	230	230
				Total Delay LOS	-	-	-	14.9	14.9	14.9	6.4	6.4	-	-	21.3	21.3
					-	-	-	B	B	B	A	A	-	-	C	C
IH 41 NB ramps & WIS 55 (Delanglade St)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	1	0
				Volume (vph)	50	0	270	-	-	-	-	500	130	30	250	-
				Total Delay LOS	4.3	4.3	6.9	-	-	-	-	5.9	4	3.1	4.9	-
			PM	Volume (vph)	90	0	370	-	-	-	-	570	120	30	350	-
				Total Delay LOS	5.2	5.2	9.7	-	-	-	-	7.8	3.9	3.1	5.8	-
					A	A	A	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & WIS 55 (Delanglade St)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1	1	0	<2	0	0	1	1
				Volume (vph)	-	-	-	80	0	70	270	280	-	-	200	140
				Total Delay LOS	-	-	-	5.4	5.4	4.2	4.8	4.9	-	-	6.2	5
			PM	Volume (vph)	-	-	-	190	0	50	410	250	-	-	190	80
				Total Delay LOS	-	-	-	7.8	7.8	3.9	6	4.6	-	-	7.9	5
					-	-	-	A	A	A	A	A	-	-	A	A
IH 41 NB ramps & CTH N (Freedom Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	110	-	170	-	-	-	-	480	190	80	250	-
				Total Delay LOS	20.6	-	0	-	-	-	-	11.6	0	10.9	3.3	-
			PM	Volume (vph)	430	-	360	-	-	-	-	460	140	90	570	-
				Total Delay LOS	28.9	-	0	-	-	-	-	17	0	17.3	7.8	-
					C	-	A	-	-	-	-	B	A	B	A	-
IH 41 SB ramps & CTH N (Freedom Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	0	<1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	120	-	70	320	270	-	-	210	270
				Total Delay LOS	-	-	-	20.3	-	0	12	3.5	-	-	10.7	0
			PM	Volume (vph)	-	-	-	C	-	A	B	A	-	-	B	A
				Total Delay LOS	-	-	-	350	-	120	340	550	-	-	310	200
					-	-	-	24.6	-	0	20.5	7	-	-	15.1	0
IH 41 NB ramps & CTH E (Ballard Rd)	No Build (2028)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	540	-	350	-	-	-	-	650	270	810	290	-
				Total Delay LOS	49.6	-	0	-	-	-	-	26.2	0	54.6	0.1	-
			PM	Volume (vph)	420	-	150	-	-	-	-	1140	190	580	790	-
				Total Delay LOS	41.2	-	0	-	-	-	-	40.8	0	40.6	11.1	-
					D	-	A	-	-	-	-	D	A	D	B	-
IH 41 SB ramps & CTH E (Ballard Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	230	-	660	160	1030	-	-	870	550
				Total Delay LOS	-	-	-	30.7	-	0	17.8	25.7	-	-	41	0
			PM	Volume (vph)	-	-	-	C	-	A	B	C	-	-	D	A
				Total Delay LOS	-	-	-	230	-	510	450	1110	-	-	1140	660
					-	-	-	34	-	0	37.7	14.6	-	-	34.5	0
IH 41 NB ramps & WIS 47 (Richmond St)	No Build (2028)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	270	-	150	-	-	-	-	560	420	300	620	-
				Total Delay LOS	42.7	-	0	-	-	-	-	23.8	0	10	13.7	-
			PM	Volume (vph)	480	-	260	-	-	-	-	920	510	300	1060	-
				Total Delay LOS	40.6	-	0	-	-	-	-	40.3	0	17.9	12.8	-
					D	-	A	-	-	-	-	D	A	B	B	-
IH 41 SB ramps & WIS 47 (Richmond St)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	280	-	240	380	450	-	-	640	460
				Total Delay LOS	-	-	-	42.3	-	0	5.6	0.1	-	-	20.8	0
			PM	Volume (vph)	-	-	-	D	-	A	A	A	-	-	C	A
				Total Delay LOS	-	-	-	520	-	290	230	1170	-	-	840	310
					-	-	-	40.9	-	0	9.7	1.1	-	-	30.2	0

I-41 Traffic and Engineering Study
Year 2028 No Build with Signal Re-timings
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2028 No Build with Signal Re-timings Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & WIS 15 (Northland Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	<1	1	0	0	0
				Volume (vph)	600	830	-	-	840	150	190	-	440	-	-	-
				Total Delay	161	5.2	-	-	24.3	0	36.4	-	0	-	-	-
				LOS	F	A	-	-	C	A	D	-	A	-	-	-
				Volume (vph)	890	970	-	-	1350	300	300	-	800	-	-	-
				Total Delay	310.6	0.3	-	-	111.4	0	43.6	-	0	-	-	-
IH 41 SB ramps & WIS 15 (Northland Ave)	No Build (2028)	Signalized	PM	LOS	F	A	-	-	F	A	D	-	A	-	-	-
				Lane Configurations	1	2	0	0	2	1	0	0	0	1	0	1
				Volume (vph)	200	1240	-	-	650	380	-	-	-	190	-	810
				Total Delay	8.9	7.9	-	-	12.9	0	-	-	-	21.2	-	0
				LOS	A	A	-	-	B	A	-	-	-	C	-	A
				Volume (vph)	230	1700	-	-	1170	480	-	-	-	160	-	890
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	No Build (2028)	Signalized	PM	Total Delay	24.6	1.6	-	-	26	0	-	-	-	43.3	-	0
				LOS	C	A	-	-	C	A	1	-	-	D	-	A
				Lane Configurations	1	2	0	0	3	1	1	<1	1	0	0	0
				Volume (vph)	170	640	-	-	740	70	290	-	380	-	-	-
				Total Delay	8	8.7	-	-	24.7	21.2	42.2	-	0	-	-	-
				LOS	A	A	-	-	C	C	D	-	A	-	-	-
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	No Build (2028)	Signalized	PM	Volume (vph)	730	1070	-	-	1800	310	420	-	490	-	-	-
				Total Delay	63.8	18.9	-	-	57.3	30.1	41.9	-	0	-	-	-
				LOS	F	B	-	-	F	C	D	-	A	-	-	-
				Lane Configurations	0	3	1	1	2	0	0	0	0	0	<1	1
				Volume (vph)	-	650	210	380	650	-	-	-	-	160	-	290
				Total Delay	-	30.7	0	6.2	0.2	-	-	-	-	35.6	-	106
IH 41 NB ramps & WIS 125 (College Ave)	No Build (2028)	Signalized	AM	LOS	-	C	A	A	A	-	-	-	-	D	-	F
				Volume (vph)	-	1580	420	600	1620	-	-	-	-	220	-	500
				Total Delay	-	73.1	0	25	8.5	-	-	-	-	36.7	-	257.3
				LOS	-	F	A	C	A	-	-	-	-	D	-	F
				Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0
				Volume (vph)	180	580	-	-	650	120	300	-	430	-	-	-
IH 41 SB ramps & WIS 125 (College Ave)	No Build (2028)	Signalized	PM	Total Delay	8.5	6.6	-	-	24	0	33.5	-	0	-	-	-
				LOS	A	A	-	-	C	A	C	-	A	-	-	-
				Volume (vph)	560	1010	-	-	1380	290	510	-	490	-	-	-
				Total Delay	45.6	9.9	-	-	51.9	0	31.4	-	0	-	-	-
				LOS	D	A	-	-	D	A	C	-	A	-	-	-
				Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2
IH 41 NB off ramp & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Volume (vph)	-	550	160	290	660	-	-	-	-	210	-	340
				Total Delay	-	27.5	0	41.5	4.9	-	-	-	-	36.7	-	0
				LOS	-	C	A	D	A	-	-	-	-	D	-	A
				Volume (vph)	-	1380	600	440	1450	-	-	-	-	190	-	210
				Total Delay	-	33.3	0	14.2	0.1	-	-	-	-	35.9	-	0
				LOS	-	C	A	B	A	-	-	-	-	D	-	A
IH 41 NB on ramp & CTH BB (Prospect Ave)	No Build (2028)	Signalized	PM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0
				Volume (vph)	-	260	-	-	520	-	210	-	450	-	-	-
				Total Delay	-	5.7	-	-	7.7	-	13.4	-	0	-	-	-
				LOS	-	A	-	-	A	-	B	-	A	-	-	-
				Volume (vph)	-	380	-	-	670	-	200	-	400	-	-	-
				Total Delay	-	5.9	-	-	8.9	-	15.3	-	0	-	-	-
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2028)	Signalized	PM	LOS	-	A	-	-	A	-	B	-	A	-	-	-
				Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0
				Volume (vph)	420	260	-	-	650	80	-	-	-	-	-	-
				Total Delay	13	0.3	-	-	12.1	5.1	-	-	-	-	-	-
				LOS	B	A	-	-	B	A	-	-	-	-	-	-
				Volume (vph)	630	380	-	-	710	160	-	-	-	-	-	-
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2028)	Signalized	PM	Total Delay	13.9	0.3	-	-	17.2	7.8	-	-	-	-	-	-
				LOS	B	A	-	-	B	A	-	-	-	-	-	-
				Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1
				Volume (vph)	-	550	210	160	490	-	-	-	-	130	-	460
				Total Delay	-	89.4	25.5	50.9	19.6	-	-	-	-	20	-	61.2
				LOS	-	F	C	D	B	-	-	-	-	B	-	E
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2028)	Signalized	PM	Volume (vph)	-	830	410	330	380	-	-	-	-	180	-	310
				Total Delay	-	225.9	36.5	52.3	8.6	-	-	-	-	29.5	-	45.1
				LOS	-	F	D	D	A	-	-	-	-	C	-	D
				Lane Configurations	0	1	1	1	1	0	0	0	0	0	0	0
				Volume (vph)	-	550	210	160	490	-	-	-	-	130	-	460
				Total Delay	-	89.4	25.5	50.9	19.6	-	-	-	-	20	-	61.2
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2028)	Signalized	PM	LOS	-	F	D	D	A	-	-	-	-	C	-	D
				Lane Configurations	0	1	1	1	1	0	0	0	0	0	0	0
				Volume (vph)	-	550	210	160	490	-	-	-	-	130	-	460
				Total Delay	-	89.4	25.5	50.9	19.6	-	-	-	-	20	-	61.2
				LOS	-	F	D	D	A	-	-	-	-	C	-	D
				Volume (vph)	-	830	410	330	380	-	-	-	-	180	-	310

I-41 Traffic and Engineering Study
Year 2048 No Build
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 No Build Intersection Operations																	
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & CTH S (Freedom Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	1	1	0	0	1	1	0	<1	1	0	0	0	
				Volume (vph)	310	160	-	-	390	190	60	0	160	-	-	-	
				Total Delay	11.2	0	-	-	0	0	119.3	119.3	10.4	-	-	-	
				LOS	B	A	-	-	A	A	F	F	B	-	-	-	
				PM	Volume (vph)	160	230	-	-	330	240	70	0	200	-	-	-
					Total Delay	9.7	0	-	-	0	0	40.6	40.6	11.6	-	-	-
IH-41 SB ramps & CTH S (Freedom Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1	
				Volume (vph)	-	390	100	240	210	-	-	-	-	80	0	-	
				Total Delay	-	0	0	10	0	-	-	-	-	94.9	94.9	-	
				LOS	-	A	A	A	A	-	-	-	-	F	F	-	
				PM	Volume (vph)	-	240	90	200	200	-	-	-	150	0	-	
					Total Delay	-	0	0	8.8	0	-	-	-	80.6	80.6	-	
IH 41 NB ramps & CTH U (County Line Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	<1>	0	0	0	0	0	1	1	1	1	0	
				Volume (vph)	80	0	90	-	-	-	-	160	380	110	430	-	
				Total Delay	37.4	37.4	37.4	-	-	-	-	0	0	9.3	0	-	
				LOS	E	E	E	-	-	-	-	A	A	A	A	-	
				PM	Volume (vph)	140	0	90	-	-	-	-	300	200	110	400	-
					Total Delay	119.8	119.8	119.8	-	-	-	-	0	0	9.1	0	-
IH 41 SB ramps & CTH U (County Line Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	0	0	0	<1>	0	1	1	0	0	1	1	
				Volume (vph)	-	-	-	150	0	120	90	150	-	-	390	-	
				Total Delay	-	-	-	42.8	42.8	42.8	9	0	-	-	0	-	
				LOS	-	-	-	E	E	E	A	A	-	-	A	-	
				PM	Volume (vph)	-	-	-	320	0	240	120	320	-	-	190	-
					Total Delay	-	-	-	358.4	358.4	358.4	8.2	0	-	-	0	-
IH 41 NB ramps & CTH J (Hyland Ave)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	<1>	0	0	0	0	0	1>	0	0	<1	0	
				Volume (vph)	240	0	150	-	-	-	-	390	430	120	230	-	
				Total Delay	10.2	10.2	10.2	-	-	-	-	69.8	69.8	6	6	-	
				LOS	B	B	B	-	-	-	-	F	F	A	A	-	
				PM	Volume (vph)	280	0	390	-	-	-	-	290	270	120	620	-
					Total Delay	100.1	100.1	100.1	-	-	-	-	16.5	16.5	11.6	11.6	-
IH 41 SB ramps & CTH J (Hyland Ave)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1>	0	0	<1	0	0	1>	0	
				Volume (vph)	-	-	-	140	0	110	220	410	-	-	210	350	
				Total Delay	-	-	-	11.3	11.3	11.3	9.2	9.2	-	-	24.5	24.5	
				LOS	-	-	-	B	B	B	A	A	-	-	C	C	
				PM	Volume (vph)	-	-	-	380	0	190	110	460	-	-	360	350
					Total Delay	-	-	-	71.9	71.9	71.9	9.4	9.4	-	-	145.4	145.4
IH 41 NB ramps & WIS 55 (Delanglade St)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	1	0	
				Volume (vph)	70	0	300	-	-	-	-	610	160	60	340	-	
				Total Delay	5	5	8.2	-	-	-	-	7	4.4	3.2	5.9	-	
				LOS	A	A	A	-	-	-	-	A	A	A	A	-	
				PM	Volume (vph)	140	0	410	-	-	-	-	710	140	70	440	-
					Total Delay	6.6	6.6	12.3	-	-	-	-	11	4.3	3.2	7.1	-
IH 41 SB ramps & WIS 55 (Delanglade St)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1	1	0	<2	0	0	1	1	
				Volume (vph)	-	-	-	90	0	120	280	400	-	-	310	220	
				Total Delay	-	-	-	6.2	6.2	5.3	4.9	5.9	-	-	8	6	
				LOS	-	-	-	A	A	A	A	A	-	-	A	A	
				PM	Volume (vph)	-	-	-	230	0	100	460	390	-	-	280	140
					Total Delay	-	-	-	10.7	10.7	5	6.6	5.9	-	-	11.2	6.1
IH 41 NB ramps & CTH N (Freedom Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	150	-	180	-	-	-	-	520	220	180	260	-	
				Total Delay	21.2	-	0	-	-	-	-	12.2	0	14	3.6	-	
				LOS	C	-	A	-	-	-	-	B	A	B	A	-	
				PM	Volume (vph)	560	-	370	-	-	-	-	510	160	190	680	-
					Total Delay	172.1	-	0	-	-	-	-	14.7	0	17.5	6.1	-
IH 41 SB ramps & CTH N (Freedom Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	0	<1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	140	-	130	320	350	-	-	300	370	
				Total Delay	-	-	-	20.6	-	0	13.8	3.7	-	-	11.3	0	
				LOS	-	-	-	C	-	A	B	A	-	-	B	A	
				PM	Volume (vph)	-	-	-	420	-	230	360	710	-	-	450	270
					Total Delay	-	-	-	32.9	-	0	26.2	9.2	-	-	20.6	0
IH 41 NB ramps & CTH E (Ballard Rd)	No Build (2048)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	740	-	380	-	-	-	-	740	280	1040	350	-	
				Total Delay	104.7	-	0	-	-	-	-	19.3	0	247	0	-	
				LOS	F	-	A	-	-	-	-	B	A	F	A	-	
				PM	Volume (vph)	550	-	160	-	-	-	-	1280	200	730	1040	-
					Total Delay	46.4	-	0	-	-	-	-	129.1	0	78.5	21.2	-
IH 41 SB ramps & CTH E (Ballard Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	240	-	920	160	1320	-	-	1150	760	
				Total Delay	-	-	-	30.8	-	0	19.3	29.7	-	-	135.3	0	
				LOS	-	-	-	C	-	A	B	C	-	-	F	A	
				PM	Volume (vph)	-	-	-	250	-	710	490	1340	-	-	1520	910
					Total Delay	-	-	-	34.4	-	0	43.9	16.3	-	-	135.1	0
IH 41 NB ramps & WIS 47 (Richmond St)	No Build (2048)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	410	-	160	-	-	-	-	700	440	410	710	-	
				Total Delay	40.5	-	0	-	-	-	-	30.4	0	21	16.7	-	
				LOS	D	-	A	-	-	-	-	C	A	C	B	-	
				PM	Volume (vph)	710	-	290	-	-	-	-	1130	530	420	1240	-
					Total Delay	44.4	-	0	-	-	-	-	175.4	0	19.3	9.1	-
IH 41 SB ramps & WIS 47 (Richmond St)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	280	-	340	460	650	-	-	840	680	
				Total Delay	-	-	-	42.3	-	0	9.2	0.1	-	-	23.4	0	
				LOS	-	-	-	D	-	A	A	A	-	-	C	A	
				PM	Volume (vph)	-	-	-	540	-	420	260	1580	-	-	1120	470
					Total Delay	-	-	-	41	-	0	17.8	8.7	-	-	47.5	0

*Note: Roundabout intersections were analyzed using HCS7 software, not Synchro.

I-41 Traffic and Engineering Study
Year 2048 No Build
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 No Build Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & WIS 15 (Northland Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	<1	1	0	0	0
				Volume (vph)	810	980	-	-	1000	170	270	-	490	-	-	-
				Total Delay	516.3	7.5	-	-	36.5	0	56.1	-	0	-	-	-
				LOS	F	A	-	-	D	A	E	-	A	-	-	-
				Volume (vph)	1220	1110	-	-	1620	340	420	-	900	-	-	-
				Total Delay	586.9	0.1	-	-	321.7	0	53.7	-	0	-	-	-
IH 41 SB ramps & WIS 15 (Northland Ave)	No Build (2048)	Signalized	PM	Lane Configurations	1	2	0	0	2	1	0	0	0	1	0	1
				Volume (vph)	280	1560	-	-	810	460	-	-	-	230	-	1090
				Total Delay	20	16.9	-	-	16.7	0	-	-	-	25	-	0
				LOS	C	B	-	-	B	A	-	-	-	C	-	A
				Volume (vph)	320	2150	-	-	1470	570	-	-	-	180	-	1200
				Total Delay	155.6	6	-	-	31.3	0	-	-	-	42.7	-	0
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	1	0	0	0
				Volume (vph)	190	690	-	-	780	80	350	-	390	-	-	-
				Total Delay	10	9.8	-	-	26.9	23	41.9	-	0	-	-	-
				LOS	A	A	-	-	C	C	D	-	A	-	-	-
				Volume (vph)	830	1150	-	-	1930	320	500	-	500	-	-	-
				Total Delay	124.9	20.8	-	-	110.5	33.3	42.6	-	0	-	-	-
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	No Build (2048)	Signalized	PM	Lane Configurations	0	3	1	1	2	0	0	0	0	0	<1	1
				Volume (vph)	-	720	280	410	720	-	-	-	-	160	-	360
				Total Delay	-	31.7	0	6.6	0.2	-	-	-	-	35.6	-	203.9
				LOS	-	C	A	A	A	-	-	-	-	D	-	F
				Volume (vph)	-	1760	560	640	1790	-	-	-	-	220	-	610
				Total Delay	-	119.9	0	27.2	9.4	-	-	-	-	36.7	-	396.8
IH 41 NB ramps & WIS 125 (College Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0
				Volume (vph)	230	630	-	-	710	130	300	-	440	-	-	-
				Total Delay	9.6	6.7	-	-	25.5	0	33.5	-	0	-	-	-
				LOS	A	A	-	-	C	A	C	-	A	-	-	-
				Volume (vph)	720	1070	-	-	1480	320	510	-	500	-	-	-
				Total Delay	111.1	10	-	-	89.4	0	31.4	-	0	-	-	-
IH 41 SB ramps & WIS 125 (College Ave)	No Build (2048)	Signalized	PM	Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2
				Volume (vph)	-	620	170	300	710	-	-	-	-	240	-	440
				Total Delay	-	28.6	0	41.6	5	-	-	-	-	37.4	-	0
				LOS	-	C	A	D	A	-	-	-	-	D	-	A
				Volume (vph)	-	1570	630	440	1550	-	-	-	-	220	-	270
				Total Delay	-	35.4	0	14.2	0	-	-	-	-	36.5	-	0
IH 41 NB off ramp & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0
				Volume (vph)	-	290	-	-	570	-	220	-	460	-	-	-
				Total Delay	-	5.9	-	-	8.3	-	13.6	-	0	-	-	-
				LOS	-	A	-	-	A	-	B	-	A	-	-	-
				Volume (vph)	-	420	-	-	740	-	210	-	410	-	-	-
				Total Delay	-	5.7	-	-	9.1	-	18	-	0	-	-	-
IH 41 NB on ramp & CTH BB (Prospect Ave)	No Build (2048)	Signalized	PM	Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0
				Volume (vph)	520	290	-	-	700	90	-	-	-	-	-	-
				Total Delay	15.6	0.3	-	-	32.8	8	-	-	-	-	-	-
				LOS	B	A	-	-	C	A	-	-	-	-	-	-
				Volume (vph)	780	420	-	-	770	180	-	-	-	-	-	-
				Total Delay	20.5	0.3	-	-	55.4	12.2	-	-	-	-	-	-
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1
				Volume (vph)	-	670	230	160	540	-	-	-	-	140	-	550
				Total Delay	-	217.7	28.5	50.9	24.2	-	-	-	-	18.8	-	101
				LOS	-	F	C	D	C	-	-	-	-	B	-	F
				Volume (vph)	-	1020	440	340	430	-	-	-	-	180	-	370
				Total Delay	-	353.9	38.1	181.9	11.6	-	-	-	-	22.3	-	32

I-41 Traffic and Engineering Study
Year 2048 No Build with Signal Re-timings
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 No Build with Signal Re-timings Intersection Operations																	
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & CTH S (Freedom Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	1	1	0	0	1	1	0	<1	1	0	0	0	
				Volume (vph)	310	160	-	-	390	190	60	0	160	-	-	-	
				Total Delay	11.2	0	-	-	0	0	119.3	119.3	10.4	-	-	-	
				LOS	B	A	-	-	A	A	F	F	B	-	-	-	
				PM	Volume (vph)	160	230	-	-	330	240	70	0	200	-	-	-
					Total Delay	9.7	0	-	-	0	0	40.6	40.6	11.6	-	-	-
IH 41 SB ramps & CTH S (Freedom Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1	
				Volume (vph)	-	390	100	240	210	-	-	-	-	80	0	-	
				Total Delay	-	0	0	10	0	-	-	-	-	94.9	94.9	-	
				LOS	-	A	A	A	A	-	-	-	-	F	F	-	
				PM	Volume (vph)	-	240	90	200	200	-	-	-	150	0	-	
					Total Delay	-	0	0	8.8	0	-	-	-	80.6	80.6	-	
IH 41 NB ramps & CTH U (County Line Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	<1>	0	0	0	0	0	1	1	1	1	0	
				Volume (vph)	80	0	90	-	-	-	-	160	380	110	430	-	
				Total Delay	37.4	37.4	37.4	-	-	-	-	0	0	9.3	0	-	
				LOS	E	E	E	-	-	-	-	A	A	A	A	-	
				PM	Volume (vph)	140	0	90	-	-	-	-	300	200	110	400	-
					Total Delay	119.8	119.8	119.8	-	-	-	-	0	0	9.1	0	-
IH 41 SB ramps & CTH U (County Line Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	0	0	0	<1>	0	1	1	0	0	1	1	
				Volume (vph)	-	-	-	150	0	120	90	150	-	-	390	-	
				Total Delay	-	-	-	42.8	42.8	42.8	9	0	-	-	0	-	
				LOS	-	-	-	E	E	E	A	A	-	-	A	-	
				PM	Volume (vph)	-	-	-	320	0	240	120	320	-	-	190	-
					Total Delay	-	-	-	358.4	358.4	358.4	8.2	0	-	-	0	-
IH 41 NB ramps & CTH J (Hyland Ave)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	<1>	0	0	0	0	0	1>	0	0	<1	0	
				Volume (vph)	240	0	150	-	-	-	-	390	430	120	230	-	
				Total Delay	10.2	10.2	10.2	-	-	-	-	69.8	69.8	6	6	-	
				LOS	B	B	B	-	-	-	-	F	F	A	A	-	
				PM	Volume (vph)	280	0	390	-	-	-	-	290	270	120	620	-
					Total Delay	100.1	100.1	100.1	-	-	-	-	16.5	16.5	11.6	11.6	-
IH 41 SB ramps & CTH J (Hyland Ave)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1>	0	0	<1	0	0	1>	0	
				Volume (vph)	-	-	-	140	0	110	220	410	-	-	210	350	
				Total Delay	-	-	-	11.3	11.3	11.3	9.2	9.2	-	-	24.5	24.5	
				LOS	-	-	-	B	B	B	A	A	-	-	C	C	
				PM	Volume (vph)	-	-	-	380	0	190	110	460	-	-	360	350
					Total Delay	-	-	-	71.9	71.9	71.9	9.4	9.4	-	-	145.4	145.4
IH 41 NB ramps & WIS 55 (Delanglade St)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	1	0	
				Volume (vph)	70	0	300	-	-	-	-	610	160	60	340	-	
				Total Delay	5	5	8.2	-	-	-	-	7	4.4	3.2	5.9	-	
				LOS	A	A	A	-	-	-	-	A	A	A	A	-	
				PM	Volume (vph)	140	0	410	-	-	-	-	710	140	70	440	-
					Total Delay	6.6	6.6	12.3	-	-	-	-	11	4.3	3.2	7.1	-
IH 41 SB ramps & WIS 55 (Delanglade St)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1	1	0	<2	0	0	1	1	
				Volume (vph)	-	-	-	90	0	120	280	400	-	-	310	220	
				Total Delay	-	-	-	6.2	6.2	5.3	4.9	5.9	-	-	8	6	
				LOS	-	-	-	A	A	A	A	A	-	-	A	A	
				PM	Volume (vph)	-	-	-	230	0	100	460	390	-	-	280	140
					Total Delay	-	-	-	10.7	10.7	5	6.6	5.9	-	-	11.2	6.1
IH 41 NB ramps & CTH N (Freedom Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	150	-	180	-	-	-	-	520	220	180	260	-	
				Total Delay	21.2	-	0	-	-	-	-	12.2	0	14	3.6	-	
				LOS	C	-	A	-	-	-	-	B	A	B	A	-	
				PM	Volume (vph)	560	-	370	-	-	-	-	510	160	190	680	-
					Total Delay	53.3	-	0	-	-	-	-	18.9	0	23	9.5	-
IH 41 SB ramps & CTH N (Freedom Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	0	<1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	140	-	130	320	350	-	-	300	370	
				Total Delay	-	-	-	20.6	-	0	13.8	3.7	-	-	11.3	0	
				LOS	-	-	-	C	-	A	B	A	-	-	B	A	
				PM	Volume (vph)	-	-	-	420	-	230	360	710	-	-	450	270
					Total Delay	-	-	-	32.9	-	0	26.2	9.2	-	-	20.6	0
IH 41 NB ramps & CTH E (Ballard Rd)	No Build (2048)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	740	-	380	-	-	-	-	740	280	1040	350	-	
				Total Delay	62	-	0	-	-	-	-	25.6	0	295.7	6.2	-	
				LOS	E	-	A	-	-	-	-	C	A	F	A	-	
				PM	Volume (vph)	550	-	160	-	-	-	-	1280	200	730	1040	-
					Total Delay	50.1	-	0	-	-	-	-	80.8	0	100.4	12.6	-
IH 41 SB ramps & CTH E (Ballard Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	240	-	920	160	1320	-	-	1150	760	
				Total Delay	-	-	-	33.6	-	0	21.7	27.9	-	-	65.8	0	
				LOS	-	-	-	C	-	A	C	C	-	-	F	A	
				PM	Volume (vph)	-	-	-	250	-	710	490	1340	-	-	1520	910
					Total Delay	-	-	-	50.5	-	0	40	3.5	-	-	34.4	0
IH 41 NB ramps & WIS 47 (Richmond St)	No Build (2048)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	410	-	160	-	-	-	-	700	440	410	710	-	
				Total Delay	40.5	-	0	-	-	-	-	30.4	0	21	16.7	-	
				LOS	D	-	A	-	-	-	-	C	A	C	B	-	
				PM	Volume (vph)	710	-	290	-	-	-	-	1130	530	420	1240	-
					Total Delay	52.4	-	0	-	-	-	-	52.6	0	31.2	16.2	-
IH 41 SB ramps & WIS 47 (Richmond St)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	280	-	340	460	650	-	-	840	680	
				Total Delay	-	-	-	42.3	-	0	9.2	0.1	-	-	23.4	0	
				LOS	-	-	-	D	-	A	A	A	-	-	C	A	
				PM	Volume (vph)	-	-	-	540	-	420	260	1580	-	-	1120	470
					Total Delay	-	-	-	41	-	0	18	8.9	-	-	47.5	0

*Note: Roundabout intersections were analyzed using HCS7 software, not Synchro.

I-41 Traffic and Engineering Study
Year 2048 No Build with Signal Re-timings
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 No Build with Signal Re-timings Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & WIS 15 (Northland Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	<1	1	0	0	0
				Volume (vph)	810	980	-	-	1000	170	270	-	490	-	-	-
				Total Delay	530.3	8.1	-	-	41.2	0	49	-	0	-	-	-
				LOS	F	A	-	-	D	A	D	-	A	-	-	-
				Volume (vph)	1220	1110	-	-	1620	340	420	-	900	-	-	-
				Total Delay	586.9	0.1	-	-	321.7	0	53.7	-	0	-	-	-
PM	LOS	F	A	-	-	F	A	D	-	A	-	-	-			
IH 41 SB ramps & WIS 15 (Northland Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	0	0	1	0	1
				Volume (vph)	280	1560	-	-	810	460	-	-	-	230	-	1090
				Total Delay	20	16.9	-	-	16.7	0	-	-	-	25	-	0
				LOS	C	B	-	-	B	A	-	-	-	C	-	A
				Volume (vph)	320	2150	-	-	1470	570	-	-	-	180	-	1200
				Total Delay	46.6	6	-	-	35.7	0	-	-	-	42.7	-	0
PM	LOS	D	A	-	-	D	A	-	-	D	-	A				
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	1	0	0	0
				Volume (vph)	190	690	-	-	780	80	350	-	390	-	-	-
				Total Delay	12.1	16.8	-	-	26.9	23	41.9	-	0	-	-	-
				LOS	B	B	-	-	C	C	D	-	A	-	-	-
				Volume (vph)	830	1150	-	-	1930	320	500	-	500	-	-	-
				Total Delay	124.9	20.8	-	-	110.5	33.3	42.6	-	0	-	-	-
PM	LOS	F	C	-	-	F	C	D	-	A	-	-	-			
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	0	<1	1
				Volume (vph)	-	720	280	410	720	-	-	-	-	160	-	360
				Total Delay	-	35.1	0	9.4	0.3	-	-	-	-	30.7	-	103
				LOS	-	D	A	A	A	-	-	-	-	C	-	F
				Volume (vph)	-	1760	560	640	1790	-	-	-	-	220	-	610
				Total Delay	-	119.9	0	27.2	9.4	-	-	-	-	36.7	-	396.8
PM	LOS	-	F	A	C	A	-	-	-	D	-	F				
IH 41 NB ramps & WIS 125 (College Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0
				Volume (vph)	230	630	-	-	710	130	300	-	440	-	-	-
				Total Delay	9.6	6.7	-	-	25.5	0	33.5	-	0	-	-	-
				LOS	A	A	-	-	C	A	C	-	A	-	-	-
				Volume (vph)	720	1070	-	-	1480	320	510	-	500	-	-	-
				Total Delay	34.1	4.9	-	-	51.6	0	50.7	-	0	-	-	-
PM	LOS	C	A	-	-	D	A	D	-	A	-	-	-			
IH 41 SB ramps & WIS 125 (College Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2
				Volume (vph)	-	620	170	300	710	-	-	-	-	240	-	440
				Total Delay	-	28.6	0	41.6	5	-	-	-	-	37.4	-	0
				LOS	-	C	A	D	A	-	-	-	-	D	-	A
				Volume (vph)	-	1570	630	440	1550	-	-	-	-	220	-	270
				Total Delay	-	35.4	0	14.2	0	-	-	-	-	36.5	-	0
PM	LOS	-	D	A	B	A	-	-	-	D	-	A				
IH 41 NB off ramp & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0
				Volume (vph)	-	290	-	-	570	-	220	-	460	-	-	-
				Total Delay	-	5.9	-	-	8.3	-	13.6	-	0	-	-	-
				LOS	-	A	-	-	A	-	B	-	A	-	-	-
				Volume (vph)	-	420	-	-	740	-	210	-	410	-	-	-
				Total Delay	-	5.7	-	-	9.1	-	18	-	0	-	-	-
PM	LOS	-	A	-	-	A	-	B	-	A	-	-				
IH 41 NB on ramp & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0
				Volume (vph)	520	290	-	-	700	90	-	-	-	-	-	-
				Total Delay	15.6	0.3	-	-	32.8	8	-	-	-	-	-	-
				LOS	B	A	-	-	C	A	-	-	-	-	-	-
				Volume (vph)	780	420	-	-	770	180	-	-	-	-	-	-
				Total Delay	24.2	0.3	-	-	47.2	12.5	-	-	-	-	-	-
PM	LOS	C	A	-	-	D	B	-	-	-	-	-				
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1
				Volume (vph)	-	670	230	160	540	-	-	-	-	140	-	550
				Total Delay	-	229.5	28.9	48.9	24.6	-	-	-	-	18.3	-	96
				LOS	-	F	C	D	C	-	-	-	-	B	-	F
				Volume (vph)	-	1020	440	340	430	-	-	-	-	180	-	370
				Total Delay	-	397.9	49.8	75.1	11	-	-	-	-	27.6	-	52.9
PM	LOS	-	F	D	E	B	-	-	-	C	-	D				

I-41 Traffic and Engineering Study
Year 2028 Build with Short Term Improvements
Synchro Intersection Peak Hour Traffic Operations (HCM6)

Year 2028 Build with Short Term Improvements Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & CTH E (Ballard Rd)	Build (2028) Short Term	Signalized	Lane Configurations		1	<1	2	0	0	0	0	3	1	1	2	0
			AM	Volume (vph)	540	-	350	-	-	-	-	650	270	810	290	-
				Total Delay	50	-	39	-	-	-	-	32.5	0	40.2	4.7	-
				LOS	D	-	D	-	-	-	-	C	A	D	A	-
			PM	Volume (vph)	420	-	150	-	-	-	-	1140	190	580	790	-
				Total Delay	44.6	-	37.2	-	-	-	-	35.3	0	25.5	10.1	-
				LOS	D	-	D	-	-	-	-	D	A	C	B	-
IH 41 SB ramps & CTH E (Ballard Rd)	Build (2028) Short Term	Signalized	Lane Configurations		0	0	0	1	<1	2	1	2	0	0	3	1
			AM	Volume (vph)	-	-	-	230	-	660	160	1030	-	-	870	550
				Total Delay	-	-	-	30.8	-	70.2	14	25.9	-	-	31	0
				LOS	-	-	-	C	-	F	B	C	-	-	C	A
			PM	Volume (vph)	-	-	-	230	-	510	450	1110	-	-	1140	660
				Total Delay	-	-	-	35.8	-	63.7	18.7	6.3	-	-	29.6	0
				LOS	-	-	-	D	-	E	B	A	-	-	C	A
IH 41 NB ramps & WIS 15 (Northland Ave)	Build (2028) Short Term	Signalized	Lane Configurations		2	2	0	0	3	1	1	<1	1	0	0	0
			AM	Volume (vph)	600	830	-	-	840	150	190	-	440	-	-	-
				Total Delay	33.4	3.2	-	-	17.5	0	38	-	0	-	-	-
				LOS	C	A	-	-	B	A	D	-	A	-	-	-
			PM	Volume (vph)	890	970	-	-	1350	300	300	-	800	-	-	-
				Total Delay	26.6	0.2	-	-	23.1	0	39.9	-	0	-	-	-
				LOS	C	A	-	-	C	A	D	-	A	-	-	-
IH 41 SB ramps & WIS 15 (Northland Ave)	Build (2028) Short Term	Signalized	Lane Configurations		1	2	0	0	2	1	0	0	0	1	0	2
			AM	Volume (vph)	200	1240	-	-	650	380	-	-	-	190	-	810
				Total Delay	16.9	19.5	-	-	23	0	-	-	-	26	-	102.5
				LOS	B	B	-	-	C	A	-	-	-	C	-	F
			PM	Volume (vph)	230	1700	-	-	1170	480	-	-	-	160	-	890
				Total Delay	27	18.7	-	-	13.3	0	-	-	-	27.8	-	172
				LOS	C	B	-	-	B	A	-	-	-	C	-	F
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	Build (2028) Short Term	Signalized	Lane Configurations		1	2	0	0	4	1	1	<1	2	0	0	0
			AM	Volume (vph)	170	640	-	-	740	70	290	-	380	-	-	-
				Total Delay	7	8.7	-	-	23.3	21.2	42.2	-	0	-	-	-
				LOS	A	A	-	-	C	C	D	-	A	-	-	-
			PM	Volume (vph)	730	1070	-	-	1800	310	420	-	490	-	-	-
				Total Delay	39.8	18.8	-	-	43	36.6	43	-	0	-	-	-
				LOS	D	B	-	-	D	D	D	-	A	-	-	-
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	Build (2028) Short Term	Signalized	Lane Configurations		0	3	1	1	3	0	0	0	0	0	<1	2
			AM	Volume (vph)	-	650	210	380	650	-	-	-	-	160	-	290
				Total Delay	-	27	0	5.4	0.1	-	-	-	-	40.5	-	42.6
				LOS	-	C	A	A	A	-	-	-	-	D	-	D
			PM	Volume (vph)	-	1580	420	600	1620	-	-	-	-	220	-	500
				Total Delay	-	53.1	0	6.8	0	-	-	-	-	42	-	67.9
				LOS	-	D	A	A	A	-	-	-	-	D	-	E

I-41 Traffic and Engineering Study
Year 2048 Build with Short Term Improvements
Synchro Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 Build with Short Term Improvements Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & CTH E (Ballard Rd)	Build (2048) Short Term	Signalized	Lane Configurations		1	<1	2	0	0	0	0	3	1	1	2	0
			AM	Volume (vph)	770	-	410	-	-	-	-	800	280	1130	350	-
				Total Delay	63.1	-	34.4	-	-	-	-	43	0	260.9	16.9	-
				LOS	E	-	C	-	-	-	-	D	A	F	B	-
			PM	Volume (vph)	570	-	180	-	-	-	-	1360	200	810	1050	-
				Total Delay	53.4	-	35.3	-	-	-	-	46.2	0	69.2	12.6	-
				LOS	D	-	D	-	-	-	-	D	A	F	B	-
IH 41 SB ramps & CTH E (Ballard Rd)	Build (2048) Short Term	Signalized	Lane Configurations		0	0	0	1	<1	2	1	2	0	0	3	1
			AM	Volume (vph)	-	-	-	300	-	940	170	1400	-	-	1180	780
				Total Delay	-	-	-	24.4	-	74.9	20.5	37.3	-	-	58.5	0
				LOS	-	-	-	C	-	F	C	D	-	-	E	A
			PM	Volume (vph)	-	-	-	300	-	720	540	1390	-	-	1560	920
				Total Delay	-	-	-	29.7	-	53.3	45.3	30.4	-	-	108.2	0
				LOS	-	-	-	C	-	D	D	C	-	-	F	A
IH 41 NB ramps & WIS 15 (Northland Ave)	Build (2048) Short Term	Signalized	Lane Configurations		2	2	0	0	3	1	1	<1	1	0	0	0
			AM	Volume (vph)	910	980	-	-	990	180	260	-	480	-	-	-
				Total Delay	27.6	4.1	-	-	31.4	0	38	-	0	-	-	-
				LOS	C	A	-	-	C	A	D	-	A	-	-	-
			PM	Volume (vph)	1360	1080	-	-	1580	360	410	-	880	-	-	-
				Total Delay	72.6	0.1	-	-	68.3	0	39.8	-	0	-	-	-
				LOS	F	A	-	-	F	A	D	-	A	-	-	-
IH 41 SB ramps & WIS 15 (Northland Ave)	Build (2048) Short Term	Signalized	Lane Configurations		1	2	0	0	2	1	0	0	0	1	0	2
			AM	Volume (vph)	280	1620	-	-	810	440	-	-	-	270	-	1190
				Total Delay	26.4	34.8	-	-	24.9	0	-	-	-	32.6	-	115.5
				LOS	C	C	-	-	C	A	-	-	-	C	-	F
			PM	Volume (vph)	310	2230	-	-	1430	560	-	-	-	210	-	1320
				Total Delay	37.3	81.9	-	-	94.5	0	-	-	-	29.1	-	89.9
				LOS	D	F	-	-	F	A	-	-	-	C	-	F
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	Build (2048) Short Term	Signalized	Lane Configurations		1	2	0	0	4	1	1	<1	2	0	0	0
			AM	Volume (vph)	250	720	-	-	800	80	330	-	390	-	-	-
				Total Delay	10.1	9.7	-	-	24.7	22.5	41.8	-	0	-	-	-
				LOS	B	A	-	-	C	C	D	-	A	-	-	-
			PM	Volume (vph)	1070	1100	-	-	1950	350	490	-	490	-	-	-
				Total Delay	254.3	11.7	-	-	42.2	36.1	44	-	0	-	-	-
				LOS	F	B	-	-	D	D	D	-	A	-	-	-
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	Build (2048) Short Term	Signalized	Lane Configurations		0	3	1	1	3	0	0	0	0	0	<1	2
			AM	Volume (vph)	-	770	300	440	690	-	-	-	-	200	-	380
				Total Delay	-	31.6	0	8.5	0.1	-	-	-	-	40.7	-	46.2
				LOS	-	C	A	A	A	-	-	-	-	D	-	D
			PM	Volume (vph)	-	1900	590	690	1750	-	-	-	-	270	-	650
				Total Delay	-	80.9	0	44.8	0.5	-	-	-	-	52.3	-	164.2
				LOS	-	F	A	F	A	-	-	-	-	D	-	F

I-41 Traffic and Engineering Study
Year 2048 Build with Long Term Improvements and Signal Re-timings
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 Build with Long Term Improvements and Signal Re-timings Intersection Operations																	
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & CTH S (Freedom Rd)	Build (2048)	Signalized	Lane Configurations		1	1	0	0	1	1	0	<1	1	0	0	0	
			AM	Volume (vph)	320	200	-	-	400	210	50	-	170	-	-	-	
				Total Delay	19	4.8	-	-	5.7	5	20.8	-	29.3	-	-	-	
				LOS	B	A	A	A	A	A	C	A	C	-	-	-	
			PM	Volume (vph)	170	260	-	-	340	250	60	-	210	-	-	-	
				Total Delay	12.8	7	-	-	7.6	7.3	12.7	-	16.6	-	-	-	
				LOS	B	A	A	A	A	A	B	A	B	-	-	-	
IH-41 SB ramps & CTH S (Freedom Rd)	Build (2048)	Signalized	Lane Configurations		0	1	1	1	1	0	0	0	0	0	0	<1	1
			AM	Volume (vph)	-	400	100	240	210	-	-	-	-	120	-	120	
				Total Delay	-	7	5.5	14.7	5.9	-	-	-	-	17	-	17.4	
				LOS	A	A	A	B	A	A	A	-	-	B	A	B	
			PM	Volume (vph)	-	230	90	200	200	-	-	-	-	200	-	300	
				Total Delay	-	8.5	7.7	13.3	8.3	-	-	-	-	12.2	-	15.5	
				LOS	A	A	A	B	A	A	-	-	-	B	A	B	
IH 41 NB ramps & CTH U (County Line Rd)	Build (2048)	Stop Controlled	Lane Configurations		0	<1	1	0	0	0	0	2>	0	1	1	0	
			AM	Volume (vph)	60	0	90	-	-	-	-	150	420	110	430	-	
				Total Delay	22	22	12.7	-	-	-	-	0	0	9.4	0	-	
				LOS	C	C	B	-	-	-	-	A	A	A	A	-	
			PM	Volume (vph)	130	0	90	-	-	-	-	310	220	120	420	-	
				Total Delay	44.3	44.3	12.6	-	-	-	-	0	0	9.3	0	-	
				LOS	E	E	B	-	-	-	-	A	A	A	A	-	
IH 41 SB ramps & CTH U (County Line Rd)	Build (2048)	Stop Controlled	Lane Configurations		0	0	0	0	<1	1	1	1	0	0	2>	0	
			AM	Volume (vph)	-	-	-	160	0	120	100	110	-	-	380	-	
				Total Delay	-	-	-	21.6	21.6	9.6	9	0	-	-	0	-	
				LOS	-	-	-	C	C	A	A	A	-	-	A	-	
			PM	Volume (vph)	-	-	-	350	0	220	130	310	-	-	190	-	
				Total Delay	-	-	-	175.4	175.4	13.2	8.2	0	-	-	0	-	
				LOS	-	-	-	F	F	B	A	A	-	-	A	-	
IH 41 NB ramps & CTH J (Hyland Ave)	Build (2048)	Roundabout*	Lane Configurations		0	<1	1	0	0	0	0	1	1	0	<1	0	
			AM	Volume (vph)	270	-	160	-	-	-	-	380	440	130	230	-	
				Total Delay	6.8	-	6.8	-	-	-	-	9.6	9.6	6.1	6.1	-	
				LOS	A	-	A	-	-	-	-	A	A	A	A	-	
			PM	Volume (vph)	320	-	420	-	-	-	-	280	280	130	670	-	
				Total Delay	17.1	-	17.1	-	-	-	-	7.2	7.2	13.2	13.2	-	
				LOS	C	-	C	-	-	-	-	A	A	B	B	-	
IH 41 SB ramps & CTH J (Hyland Ave)	Build (2048)	Roundabout*	Lane Configurations		0	0	0	0	<1	1	0	<1	0	0	1	1	
			AM	Volume (vph)	-	-	-	150	-	120	240	410	-	-	210	410	
				Total Delay	-	-	-	7.5	-	7.5	9.6	9.6	-	-	10.1	10.1	
				LOS	-	-	-	A	-	A	A	A	-	-	B	B	
			PM	Volume (vph)	-	-	-	420	-	210	120	480	-	-	380	410	
				Total Delay	-	-	-	20.9	-	20.9	10.1	10.1	-	-	14.5	14.5	
				LOS	-	-	-	C	-	C	B	B	-	-	B	B	
IH 41 NB ramps & WIS 55 (Delanglade St)	Build (2048)	Roundabout*	Lane Configurations		0	<1	1	0	0	0	0	2	1	1	1	0	
			AM	Volume (vph)	90	-	370	-	-	-	-	660	170	60	300	-	
				Total Delay	8.3	-	8.3	-	-	-	-	6.4	6.4	5.3	5.3	-	
				LOS	A	-	A	-	-	-	-	A	A	A	A	-	
			PM	Volume (vph)	160	-	510	-	-	-	-	770	150	60	430	-	
				Total Delay	14	-	14	-	-	-	-	9.7	9.7	6.6	6.6	-	
				LOS	B	-	B	-	-	-	-	A	A	A	A	-	
IH 41 SB ramps & WIS 55 (Delanglade St)	Build (2048)	Roundabout*	Lane Configurations		0	0	0	0	<1	1	0	<2	0	0	1	1	
			AM	Volume (vph)	-	-	-	100	-	120	330	420	-	-	260	240	
				Total Delay	-	-	-	6	-	6	5.8	5.8	-	-	7.2	7.2	
				LOS	-	-	-	A	-	A	A	A	-	-	A	A	
			PM	Volume (vph)	-	-	-	240	-	90	550	380	-	-	250	140	
				Total Delay	-	-	-	10.2	-	10.2	6.8	6.8	-	-	9.9	9.9	
				LOS	-	-	-	B	-	B	A	A	-	-	A	A	
IH 41 NB ramps & CTH N (Freedom Rd)	Build (2048)	Signalized	Lane Configurations		0	<1	1	0	0	0	0	2	1	1	2	0	
			AM	Volume (vph)	180	-	180	-	-	-	-	540	260	150	290	-	
				Total Delay	22	-	0	-	-	-	-	12.5	0	13.8	3.7	-	
				LOS	C	-	A	-	-	-	-	B	A	B	A	-	
			PM	Volume (vph)	630	-	370	-	-	-	-	530	190	170	770	-	
				Total Delay	34.3	-	0	-	-	-	-	24.3	0	29.1	14.5	-	
				LOS	C	-	A	-	-	-	-	C	A	C	B	-	
IH 41 SB ramps & CTH N (Freedom Rd)	Build (2048)	Signalized	Lane Configurations		0	0	0	0	<1	1	1	2	0	0	2	1	
			AM	Volume (vph)	-	-	-	190	-	110	340	380	-	-	250	450	
				Total Delay	-	-	-	21.7	-	0	13.8	3.9	-	-	11.3	0	
				LOS	-	-	-	C	-	A	B	A	-	-	B	A	
			PM	Volume (vph)	-	-	-	510	-	190	390	770	-	-	430	330	
				Total Delay	-	-	-	40.2	-	0	33.5	13	-	-	29.2	0	
				LOS	-	-	-	D	-	A	C	B	-	-	C	A	
IH 41 NB ramps & CTH E (Ballard Rd)	Build (2048)	Signalized	Lane Configurations		1	<1	2	0	0	0	0	4	1	2	2	0	
			AM	Volume (vph)	770	-	410	-	-	-	-	800	280	1130	350	-	
				Total Delay	40	-	30.2	-	-	-	-	36.3	0	62.9	18.9	-	
				LOS	D	-	C	-	-	-	-	D	A	E	B	-	
			PM	Volume (vph)	570	-	180	-	-	-	-	1360	200	810	1050	-	
				Total Delay	43.3	-	33.5	-	-	-	-	41.2	0	35.8	22.1	-	
				LOS	D	-	C	-	-	-	-	D	A	D	C	-	
IH 41 SB ramps & CTH E (Ballard Rd)	Build (2048)	Signalized	Lane Configurations		0	0	0	1	<1	2	2	2	0	0	4	1	
			AM	Volume (vph)	-	-	-	300	-	940	170	1400	-	-	1180	780	
				Total Delay	-	-	-	23.7	-	65	37.3	39.3	-	-	35.4	0	
				LOS	-	-	-	C	-	F	D	D	-	-	D	A	
			PM	Volume (vph)	-	-	-	300	-	720	540	1390	-	-	1560	920	
				Total Delay	-	-	-	28	-	42.5	41.2	31.8	-	-	36.6	0	
				LOS	-	-	-	C	-	D	D	C	-	-	D	A	
IH 41 NB ramps & WIS 47 (Richmond St)	Build (2048)	Signalized	Lane Configurations		1	<1	1	0	0	0	0	3	1	1	2	0	
			AM	Volume (vph)	420	-	170	-	-	-	-	690	490	470	700	-	
				Total Delay	42.7	-	0	-	-	-	-	25.9	0	18.2	16.4	-	
				LOS	D	-	A	-	-	-	-	C	A	B	B	-	
			PM	Volume (vph)	720	-	310	-	-	-	-	1120	590	480	1250	-	
				Total Delay	40.2	-	0	-	-	-	-	31	0	31	26.6	-	
				LOS	D	-	A	-	-	-	-	C	A	C	C	-	
IH 41 SB ramps & WIS 47 (Richmond St)	Build (2048)	Signalized	Lane Configurations		0	0	0	1	<1	1	1	2	0	0	3	1	
			AM	Volume (vph)	-	-	-	320	-	360	480	630	-	-	850	710	
				Total Delay	-	-	-	41.7	-	0	7.5	0.1	-	-	20.8	0	
				LOS	-	-	-	D	-	A	A	A	-	-	C	A	
			PM	Volume (vph)	-	-	-	590	-	440	280	1560	-	-	1140	480	
				Total Delay	-	-	-	39.3	-	0	14.9	18.8	-	-	31.7	0	
				LOS	-	-	-	D	-	A	B	B	-	-	C	A	

I-41 Traffic and Engineering Study
Year 2048 Build with Long Term Improvements and Signal Re-timings
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 Build with Long Term Improvements and Signal Re-timings Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & WIS 15 (Northland Ave)	Build (2048)	Signalized	AM	Lane Configurations	2	3	0	0	4	1	1	<1	1	0	0	0
				Volume (vph)	910	980	-	-	990	180	260	-	480	-	-	
				Total Delay	42.6	3.6	-	-	24.3	0	37.8	-	0	-	-	
				LOS	D	A	-	-	C	A	D	-	A	-	-	
				Volume (vph)	1360	1080	-	-	1580	360	410	-	880	-	-	
				Total Delay	27.6	0.1	-	-	50.1	0	41.9	-	0	-	-	
LOS	C	A	-	-	D	A	D	-	A	-	-					
IH 41 SB ramps & WIS 15 (Northland Ave)	Build (2048)	Signalized	AM	Lane Configurations	2	3	0	0	3	1	0	0	0	1	0	2
				Volume (vph)	280	1620	-	-	810	440	-	-	-	270	-	1190
				Total Delay	43.2	23.6	-	-	30	0	-	-	-	22.5	-	43.1
				LOS	D	C	-	-	C	A	-	-	-	C	-	D
				Volume (vph)	310	2230	-	-	1430	560	-	-	-	210	-	1320
				Total Delay	46	37.1	-	-	33	0	-	-	-	19.5	-	38.7
LOS	D	D	-	-	C	A	-	-	-	B	-	D				
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	Build (2048)	Signalized	AM	Lane Configurations	2	2	0	0	4	1	1	<1	2	0	0	0
				Volume (vph)	250	720	-	-	800	80	330	-	390	-	-	-
				Total Delay	27.4	11.6	-	-	28.1	25.5	37	-	42.2	-	-	-
				LOS	C	B	-	-	C	C	D	-	D	-	-	-
				Volume (vph)	1070	1100	-	-	1950	350	490	-	490	-	-	-
				Total Delay	42.6	12.2	-	-	34.1	31.6	42.4	-	48.5	-	-	-
LOS	D	B	-	-	C	C	D	-	D	-	-	-				
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	Build (2048)	Signalized	AM	Lane Configurations	0	4	1	2	2	0	0	0	0	1	<1	2
				Volume (vph)	-	770	300	440	690	-	-	-	-	200	-	380
				Total Delay	-	28	0	10.7	0.2	-	-	-	-	34.9	-	42.8
				LOS	-	C	A	B	A	-	-	-	-	C	-	D
				Volume (vph)	-	1900	590	690	1750	-	-	-	-	270	-	650
				Total Delay	-	48.6	0	25.9	8.6	-	-	-	-	34.1	-	71
LOS	-	D	A	C	A	-	-	-	-	C	-	E				
IH 41 NB ramps & WIS 125 (College Ave)	Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0
				Volume (vph)	240	600	-	-	680	140	340	-	430	-	-	-
				Total Delay	7.3	6.6	-	-	0.3	0	34.3	-	0	-	-	-
				LOS	A	A	-	-	A	A	C	-	A	-	-	-
				Volume (vph)	750	990	-	-	1430	340	560	-	490	-	-	-
				Total Delay	35.8	4.9	-	-	35.1	0	58.1	-	0	-	-	-
LOS	D	A	-	-	D	A	E	-	A	-	-	-				
IH 41 SB ramps & WIS 125 (College Ave)	Build (2048)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2
				Volume (vph)	-	600	160	300	720	-	-	-	-	240	-	450
				Total Delay	-	28.4	0	41.3	5	-	-	-	-	37.4	-	0
				LOS	-	C	A	D	A	-	-	-	-	D	-	A
				Volume (vph)	-	1520	610	450	1540	-	-	-	-	220	-	280
				Total Delay	-	33.7	0	14	0	-	-	-	-	38.7	-	0
LOS	-	C	A	B	A	-	-	-	-	D	-	A				
IH 41 NB off ramp & CTH BB (Prospect Ave)	Build (2048)	Signalized	AM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0
				Volume (vph)	-	300	-	-	560	-	220	-	440	-	-	-
				Total Delay	-	6	-	-	8.2	-	13.6	-	0	-	-	-
				LOS	-	A	-	-	A	-	B	-	A	-	-	-
				Volume (vph)	-	410	-	-	720	-	210	-	400	-	-	-
				Total Delay	-	5.8	-	-	9.1	-	17.2	-	0	-	-	-
LOS	-	A	-	-	A	-	B	-	A	-	-	-				
IH 41 NB on ramp & CTH BB (Prospect Ave)	Build (2048)	Signalized	AM	Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0
				Volume (vph)	580	300	-	-	670	110	-	-	-	-	-	-
				Total Delay	17.4	0.3	-	-	38.8	9.6	-	-	-	-	-	-
				LOS	B	A	-	-	D	A	-	-	-	-	-	-
				Volume (vph)	870	410	-	-	720	210	-	-	-	-	-	-
				Total Delay	32.3	0.2	-	-	48	14.8	-	-	-	-	-	-
LOS	C	A	-	-	D	B	-	-	-	-	-	-				
IH 41 SB off ramps & CTH BB (Prospect Ave)	Build (2048)	Signalized	AM	Lane Configurations	0	2	1	1	1	0	0	0	0	0	<1	2
				Volume (vph)	-	680	230	150	520	-	-	-	-	200	-	610
				Total Delay	-	23.3	21.3	31.6	15.2	-	-	-	-	18.8	-	25.3
				LOS	-	C	C	C	B	-	-	-	-	B	-	C
				Volume (vph)	-	1040	440	320	400	-	-	-	-	240	-	410
				Total Delay	-	31.4	33.6	42.1	7	-	-	-	-	31.8	-	32.1
LOS	-	C	C	D	A	-	-	-	-	C	-	C				